

APRIL/MAY 2024

**CMB21/FMB21 — MICROBIAL
PHYSIOLOGY**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.



1. Define oligotrophs.
2. Define symport.
3. Define pure culture.
4. What are obligatory intracellular parasites?
5. Define growth.
6. Define generation time.
7. Define fermentation.
8. Define electron transport chain.
9. Define anabolism.
10. Expand the term ATP.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Describe the mechanism of active transport of ions in bacteria.

Or

(b) Define nutrition. Add a note on basic nutritional requirements of microbes.

12. (a) How could you isolated fungi from soil?

Or

(b) Give an account on different mode of preservation of microorganisms.

13. (a) Briefly explain the adaptive mechanism of alkalophiles.

Or

(b) Give a brief note on synchronous growth.

14. (a) Explain TCA cycle with neat sketch.

Or

(b) Describe the oxidative phosphorylation.

15. (a) Differentiate between oxygenic and anoxygenic photosynthesis.

Or

(b) Give an account on bioluminescence.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss the various nutritional types of microorganisms.

17. Describe the methodology of isolation of pure culture of bacteria.

18. Explain about continuous culture system.

19. Give an account of ethanol production.

20. Write in detail biosynthesis of bacterial cell wall with neat diagram.

